



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10
1200 Sixth Avenue
Seattle, WA 98101-3140

OFFICE OF ENVIRONMENTAL CLEANUP

NOV 2 9 2010

9/19

CERTIFIED MAIL – RETURN RECEIPT REQUESTED

Mayor Greg Wheeler
City of Bremerton
Norm Dicks Government Center
345 6th Street, Suite 100
Bremerton, WA 98337

*Tom -
plz take lead to
draft response for
Mayor Wheeler
Hillman -
copy for
me plz*

Re: First Request for Information; Bremerton Gas Works Superfund Site, Bremerton, Washington

Dear Mayor Greg Wheeler:

The United States Environmental Protection Agency, Region 10 is investigating the releases or threat of releases of hazardous substances associated with the Bremerton Gas Works Superfund Site. The EPA seeks your cooperation in this investigation.

The EPA is seeking information from current and past landowners, tenants, and other entities believed to have information about activities that may have resulted in releases or potential threats of releases of hazardous substances to the Site. This information will be used for the purposes of determining the need for response, or choosing or taking any response action at the Bremerton Gas Works Superfund Site, and to identify additional potentially responsible parties for performing the cleanup.

Compliance with the Information Request set forth in Attachment A is mandatory. Failure to respond fully and truthfully to the Information Request within 90 days of receipt of this letter, or adequately to justify such failure to respond, can result in enforcement action by EPA pursuant to Section 104(e) of CERCLA, 42 U.S.C. § 9604. CERCLA permits EPA to seek the imposition of penalties of up to \$55,907 for each day of continued non-compliance.

Please note that responses which are incomplete, ambiguous or evasive may be treated as non-compliant with this Information Request. Also be further advised that provision of false, fictitious or fraudulent statements or representations may subject you to criminal penalties under 18 U.S.C. § 1001. You have an ongoing duty under this first Information Request to supplement your response with any additional information or documents that become available or known to you after you submit your response. This Information Request is not subject to the approval requirements of the Paperwork Reduction Act of 1980, 44 U.S.C. § 3501.

Please carefully read the Instructions and the Definitions that are attached to the Information Request. In addition to important information about how to respond to this Request, there are also directions about how the response must be submitted to the EPA. If the EPA has a document, as described on EPA's

Bremerton Gas Works website, you still must identify or describe information from or relevant to the document in response to questions asked, but you will not have to provide another copy of the document. Please note, if a document is not specifically described on the EPA's Bremerton Gas Works website, you must provide a full and complete copy to the EPA as instructed in the Information Request, even if you believe the EPA may have the document. The EPA's Bremerton Gas Works website is located at the following URL:

<https://cumulis.epa.gov/supercpad/cursites/esitinfo.cfm?id=1002907>

Your response to this first Information Request is due no later than 90 days. Please mail your response to:

Eva DeMaria
Remedial Project Manager
United States Environmental Protection Agency, Region 10
Office of Environmental Cleanup, M/S ECL-122
1200 Sixth Avenue, Suite 155
Seattle, Washington 98101-3140

If you have any general questions about the Site, you may call Ms. DeMaria at (206) 553-1970, or contact her by email at demaria.eva@epa.gov. If you have legal questions or questions about this letter, you may contact or, if you are represented by legal counsel, have your attorney contact Stephanie Ebright, Assistant Regional Counsel, at (206) 553-0774 or ebright.stephanie@epa.gov.

Thank you for your cooperation in this matter.

Sincerely,



Davis Zhen
Unit Manager

Enclosure

cc: Community Development
Ms. Kelli Lambert

Chal Martin

From: David Dinkuhn <DDinkuhn@parametrix.com>
Sent: Monday, September 17, 2018 1:30 PM
To: Thomas Knuckey
Cc: Chal Martin; Kelli Lambert; Kylie Purves; Amanda Harvey
Subject: RE: Bremerton Gas Works 104(e) information request
Attachments: TM-Pub Hrg w-plan 11-24-09.pdf

T,
Here is the memo I wrote for you guys. I am wide open next week, just send me a time.
Dave

From: Thomas Knuckey [mailto:Thomas.Knuckey@ci.bremerton.wa.us]
Sent: Monday, September 17, 2018 11:35 AM
To: David Dinkuhn <DDinkuhn@parametrix.com>
Cc: Chal Martin <Chal.Martin@ci.bremerton.wa.us>; Kelli Lambert <Kelli.Lambert@ci.bremerton.wa.us>; Kylie Purves <Kylie.Purves@ci.bremerton.wa.us>; Amanda Harvey <Amanda.Harvey@ci.bremerton.wa.us>
Subject: FW: Bremerton Gas Works 104(e) information request

Hi Dave – attached is the information request I mentioned a few minutes ago – I just love the partnering tone of the letter...

Would you be available next week for a 1+/- hour meeting to discuss this site? We need to get started in responding to this request and it would be very helpful to pick your brain for background. Also, if you could forward the letter on the site that you mentioned that would be very helpful.

Chal - FYI

Tom Knuckey, P.E.
City Engineer
City of Bremerton
Desk (360) 473-2376/Call (360) 509-0870
thomas.knuckey@ci.bremerton.wa.us

From: Kelli Lambert
Sent: Monday, September 17, 2018 10:08 AM
To: Thomas Knuckey <Thomas.Knuckey@ci.bremerton.wa.us>
Cc: Kylie Purves <Kylie.Purves@ci.bremerton.wa.us>; Allison Satter <Allison.Satter@ci.bremerton.wa.us>
Subject: FW: Bremerton Gas Works 104(e) information request

Tom,
We received the attached information request from EPA – we'll need Engineering's help on coordinating a response. We should meet after you've had a chance to review the letter.

Thanks –
Kelli

From: DeMaria, Eva [<mailto:DeMaria.Eva@epa.gov>]
Sent: Thursday, August 30, 2018 3:48 PM
To: Kelli Lambert <Kelli.Lambert@ci.bremerton.wa.us>
Subject: Bremerton Gas Works 104(e) information request

Hi Kelli-

I wanted to let you know that the Bremerton Gas Works 104(e) information request letter was just sent by certified mail. I have attached what was sent to the Mayor. The 90-day clock begins when the certified mail has been received. Let me know if you have questions or need an extension. Thanks.

Eva

Eva DeMaria
U.S. Environmental Protection Agency | Office of Environmental Cleanup | Site Cleanup Unit 2
1200 Sixth Avenue | Suite 155, M/S ECL-122 | Seattle, Washington 98101
(206) 553-1970
demaria.eva@epa.gov

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BREMERTON, WA 98312-2357
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TECHNICAL MEMORANDUM

Date: November 17, 2009
To: Lynn Price, P.E - City of Bremerton
From: David Dinkuhn, P.E. *(FLD)*
Subject: Summary of Brownfields Assessment Work
cc: Phil Williams - City of Bremerton
Joanne LaBaw - EPA
Project Number: 235-1896-087
Project Name: Old Bremerton Gasworks Site

SUMMARY OF BROWNFIELDS ASSESSMENT WORK – OLD BREMERTON GASWORKS SITE BREMERTON, WASHINGTON

This technical memorandum summarizes recent Brownfields Assessment (BA) work completed for the Old Bremerton Gasworks site located at 1725 Pennsylvania Avenue in Bremerton Washington. The purpose of the summary is to provide stakeholders with a concise roll up of the assessment results and cleanup cost estimates developed. Assessment work was performed under a United States Environmental Protection Agency (EPA) Brownfields Assessment (BA) grant awarded to the City of Bremerton in 2006 (Cooperative Agreement No. BF – 9604651 – 0). All assessment work was conducted according to the EPA-approved work plan (Bremerton 2006).

The Old Bremerton Gasworks Site consists of three private parcels referred to as the McConkey and Sesko properties. The purpose of the Brownfields Assessment was to investigate for potential contamination that may have been released at the site during past commercial/industrial activities. The site owners are interested in redeveloping the properties; bringing to light any potential issues regarding contamination is a necessary step in the formulation of redevelopment plans.

The City of Bremerton sponsored the Brownfields Assessment in the interests of cleaning up a potentially-contaminated shoreline property and assisting in the redevelopment efforts. The City does not currently own any potentially- impacted property with the possible exception of the road rights of way (ROWS) abutting the site.

Phase I Environmental Site Assessments

Techlaw 2006

The first assessment task performed was the performance of a Phase I Environmental Site Assessment (ESA) at each of the McConkey and Sesko properties. The purpose of the Phase I ESAs was to research the properties and identify potential environmental concerns prior to the collection of environmental samples under a follow-on Phase II ESA. Costs for this work were in excess of the funding available under the BA grant and were funded under EPA's Targeted Brownfields Assessment (TBA) grant program. The following property descriptions are based on information provided by the Phase I ESA reports (Techlaw 2006a;b).

The site was originally developed by the Western Gas and Utilities Corporation to provide the city of Bremerton with light, heat, and electricity by natural gas products. A coal gasification plant was in operation from approximately 1930 to 1956. The plant was fueled by shipments of coal delivered by boat. The gasification process may have started by processing the coal with high temperature and pressure, using boiler plant steam and measured amounts of oxygen. The final product (coal gas) was sent by pipeline to local residences in Bremerton. This site also was utilized for petroleum storage and distribution from approximately 1963 to 1985. Petroleum products were stored in above-ground storage tanks (ASTs) and distributed by underground pipeline or offloaded to vehicles. Aerial photographs suggest that the former gasification physical plant, boiler, and ASTs apparently were removed between 1985 and 1993.

The McConkey properties cover approximately 3.13 acres and currently contain five separate buildings, which are leased to a metal fabrication shop, piston ring shop, granite countertop workshop, and a welding shop. Past commercial uses include sheet metal fabrication, drum storage facilities, automotive and marine repair, metal salvage yard, painting/sandblasting activities, and petroleum bulk storage and distribution.

The Sesko property covers approximately 0.55 acres and is currently vacant but appears to be used as temporary storage for heavy equipment. The only structures on this property are the former foundations of the AST farm. The Sesko property was formerly utilized as a commercial AST and petroleum distribution facility. A bulk petroleum storage facility (ARCO, now owned by BP West Coast Products LLC) was previously located northwest of the McConkey properties. Currently, SC Fuels, a petroleum bulk storage facility, is located east of the Sesko property and Pennsylvania Avenue. Historical data in Washington State Department of Ecology (Ecology) files indicate that petroleum releases have occurred at the SC Fuels facility.

Phase II Environmental Site Assessments

GeoEngineers 2007

GeoEngineers developed a sampling program for the site based on the Phase I ESA results (GeoEngineers 2007). Eight groundwater monitoring wells were installed at locations of concern (MW-1 through MW-8). Soil samples were collected from multiple depths within the soil borings drilled for the wells and a groundwater sample was collected from each well. Samples were analyzed for contaminants of concern (COCs) including petroleum, heavy metals, and constituents associated with coal tar. Of particular concern when coal tar is present are carcinogenic polycyclic aromatic hydrocarbons (cPAHs). Contaminants were detected in soil and groundwater at concentrations exceeding potentially-applicable cleanup levels in seven of the eight wells. The soil contamination was detected from near the ground surface to depths as great as 35 feet below ground surface (bgs). Refer to Figure 1 for a site plan showing wells locations.

Ecology and Environment 2008/2009.

Ecology and Environment (E&E) performed additional sampling in 2008 to supplement the GeoEngineers study (E&E 2009). This work was performed under the TBA similar to the Phase I ESAs. A total of seven soil borings were installed and soil and groundwater samples were collected from each boring (MP01 through MP04 and SP01 through SP03; Figure 1). Two of the borings (MP04 and SP02) were completed as monitoring wells. The samples were analyzed for COCs similar to the GeoEngineers study. Soil contaminants exceeded potential cleanup levels in four borings; groundwater contaminants exceeded potential cleanup levels in six borings.

E&E also collected five sediment samples from the shoreline below the site along Port Washington Narrows (WN01 through WN05; Figure 1). The sediment samples were analyzed for heavy metals and semi-volatile organic compounds including cPAHs. Four of the five samples (WN01 through WN04) contained cPAHs at concentrations that could potentially trigger a sediment cleanup under Ecology's Sediment Management

Standards. In addition to the sediment contamination, E& E reported that “product seeps” were visible on the beach in the vicinity of samples WN01 through WN03.

Summary and Cleanup Cost Estimates

Soils containing petroleum and cPAHs at concentrations in excess of potential cleanup levels are prevalent throughout the northern half of the site. Groundwater containing these contaminants and heavy metals is present in the same location with a slightly larger area of impact. Soil contamination appears to extend from near the ground surface to depths as great as 35 feet bgs. The deeper contamination extends to the approximate average depth of the groundwater table. Petroleum floats on water and would migrate downward only until it encountered the groundwater table, at which point it would migrate laterally.

Contamination from coal gasification wastes appeared as “charcoal pieces” and “creosote odor” according to the soil boring logs and was observed to depths of 10 to 15 feet.

Sediment contamination is present at the site and appears to be bounded by the WN05 location to the west. The limits of sediment contamination in the easterly direction have not been determined.

Cleanup levels have not been established at the site but would likely include Model Toxics Control Act (MTCA) Method A cleanup levels. An estimated footprint of soil contaminated above these levels is shown on Figure 1. The footprint is approximately 1.5 acres in area. Approximate depths of contaminated soil in each boring are provided on Figure 1. Assuming soil between 3 feet bgs and the depths shown is contaminated above cleanup levels, an estimated 50,000 tons of contaminated soil are present on site.

E&E provided estimated cleanup costs for three alternatives as summarized below:

- **Alternative 1:** Hot Spot Excavation and Monitoring Well Installation - **\$338,984**. Lowest cost option that includes limited removal of the worst soils and new well installation to allow for collection of additional data to aid in future decision making.
- **Alternative 2:** Hot Spot Excavation and Groundwater Pump and Treat - **\$973,331**. This mid-range cost option would add an active groundwater treatment system to Alternative 1 to prevent migration of contaminated groundwater to Port Washington Narrows. The system would be operated for 5 years.
- **Alternative 3:** Dredging of Shoreline Sediments, Installation of an Upland Barrier Wall, and Installation of an Upland Asphalt Cap - **\$2,867,432**. High-range cost option that would add a barrier wall, asphalt cap, and sediment dredging to Alternatives 1 and 2.

Tables 4-1 and 4-2 containing detailed descriptions of the rationale and approaches for these alternatives are attached.

A fourth alternative involving complete removal of contaminated soil was developed for this memorandum to provide a worst case “upper bound” cost. Removal of the contaminated soil would be considered a permanent solution and is preferred under MTCA cleanup regulations.

- **Alternative 4:** Excavate and Remove all Contaminated Soil - **\$6,364,769**. Assumptions include: All contaminated soil from within the footprint shown on Figure 1 will be removed. Excavation sidewalls will be sloped and shoring will not be required. Soils can be disposed of as remediation waste and not dangerous/persistent waste. Dewatering will be required to completely remove soils from the groundwater table depth. Contaminated soil will be replaced with compacted structural fill to original grade.

A spreadsheet showing a detailed cost breakdown is attached.

References

Bremerton. 2006. EPA Brownfields Grant Assessment Work Plan for Old Bremerton Gas Plant Park & Property Development, Final. EPA project Number 560-F-06-201. Prepared for the United States Environmental Protection Agency, Seattle Washington. July 23.

E&E. 2009. Final Bremerton Gasworks Targeted Brownfields Assessment Report, Bremerton, Washington, Technical Direction Document Number: 07-01-0008. Prepared for the United States Environmental Protection Agency, Seattle, Washington. August.

GeoEngineers. 2007. Preliminary Upland Assessment Report McConkey/Sesko Site, 1725 Pennsylvania Avenue, Bremerton, Washington. Prepared for the United States Environmental Protection Agency, Seattle, Washington October 26.

Techlaw. 2006a. Old Bremerton Gasworks Site, Sesko Property, Targeted Brownfields Assessment, Bremerton, Washington. Prepared for the United States Environmental Protection Agency, Seattle, Washington. November 10.

Techlaw. 2006b. Old Bremerton Gasworks Site, McConkey Properties, Targeted Brownfields Assessment, Bremerton, Washington. Prepared for the United States Environmental Protection Agency, Seattle, Washington. November 10.

ALTERNATIVE 4 CLEANUP COST ESTIMATE - SOIL REMOVAL

OLD BREMERTON GASWORKS SITE

BREMERTON, WASHINGTON

Parametrix

By: D. Dinkuhn

Date Prepared 11/17/09

Checked: B. Hardy

CONSTRUCTION COSTS	NO. UNITS		UNIT COST	COST
Mobilization (5%)	1	LS	\$235,500	\$235,500
TESC	1	LS	\$10,000	\$10,000
Building Demolition	1	LS	\$100,000	\$100,000
Excavate, Stockpile, Backfill Overburden	7,200	CY	\$14.00	\$100,800
Excavate and Dispose of Contaminated Soils	50,000	TN	\$70.00	\$3,500,000
Backfill and Compact Imported Pit Run	50,000	TN	\$20.00	\$1,000,000
Excavation Dewatering	1	LS	\$150,000	\$150,000
Sales Tax (8.6%)				\$438,282
Contingency (15%)				\$830,187
Total Construction Costs				\$6,364,769



4. Cleanup Options and Cost Estimate

Table 4-1 Cleanup Estimate Option and Rationale

Cleanup Action	Rationale
Option 1 - Excavation of contaminated soil and monitoring well installation	Lowest cost option: removing contaminated soil and collection of additional data for future remediation decision making purposes.
Option 2 - Excavation of contaminated soil and installation of a pump and treat groundwater system	Mid-range cost option: collecting additional data, removing contaminated soil, and treating groundwater. This option immediately addresses upland contamination.
Option 3 - Dredging of shoreline sediments, installation of an upland barrier wall, and installation of an upland asphalt cap.	High range cost, the most comprehensive option: addresses removal of contaminated soils, sediments, and groundwater. This option also prevents residual contamination from migrating into the lowland sediments.

Table 4-2 Preliminary Cost Estimate for Cleanup Action

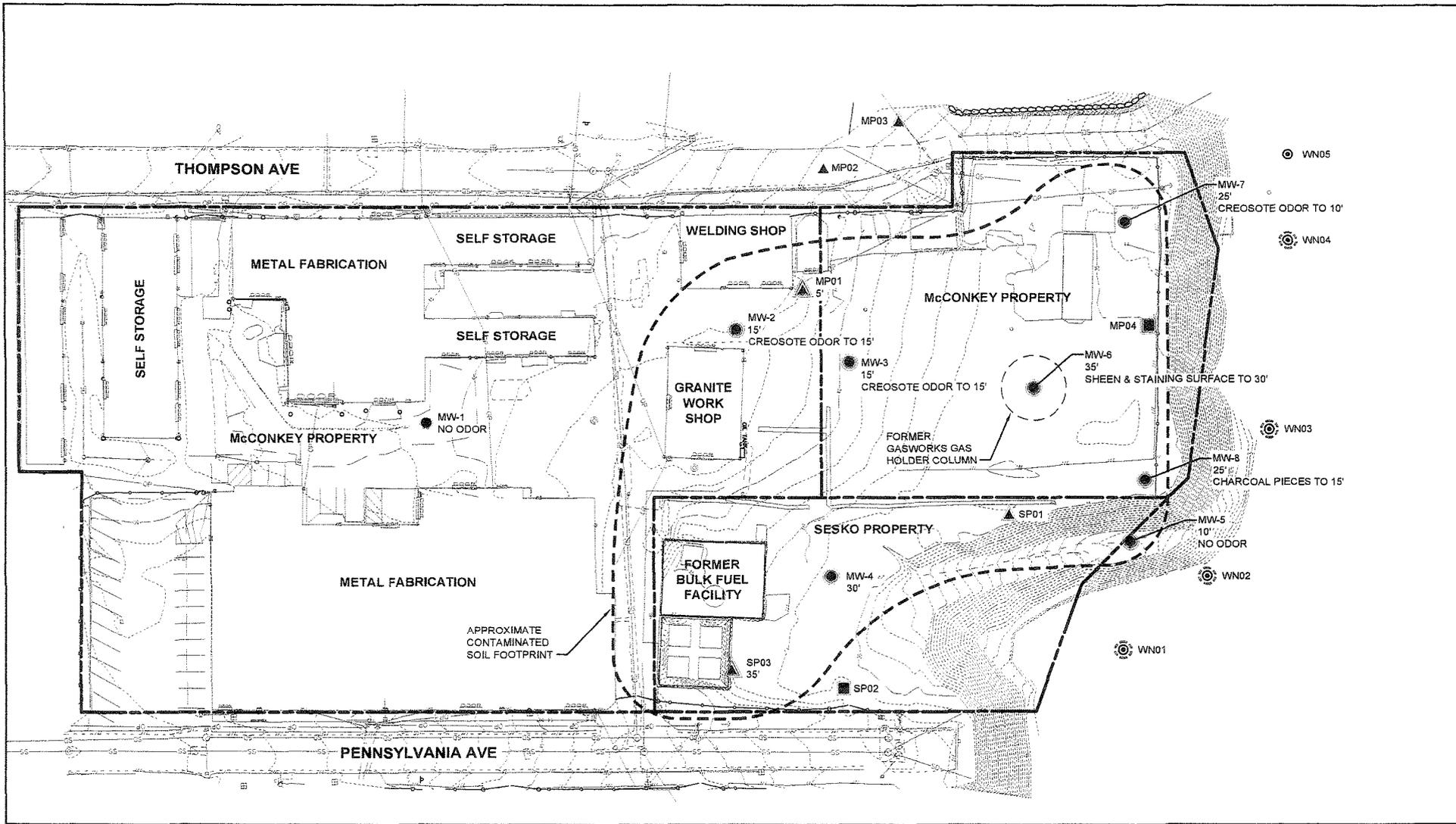
Remediation Options	Description	Estimated Cost
Option 1	Excavation of hot spot contaminated soil and monitoring well installation	
	Soil Excavation and Off-Site Disposal (hazardous waste) - assumes excavation of 2 upland hot spots (600 cubic yards total); offsite disposal at hazardous waste facility; backfilling; decontamination facilities; analytical testing	\$183,466
	Monitoring Well Installation - Install 4 monitoring wells to 45' bgs (includes initial subsurface soil sampling/analysis, and one year of groundwater monitoring)	\$102,582
	Subtotal	\$286,048
	Contingency ^a (+15%)	\$42,907
	2009 Inflation adjustment ^b	\$10,029
	Total	\$338,984
Option 2	Excavation of hot spot contaminated soil and installation of a pump and treat groundwater system	
	Soil Excavation and Off-Site Disposal (hazardous waste) - assumes excavation of 2 upland hot spots (600 cy total); offsite disposal at hazardous waste facility; backfilling; decontamination facilities; analytical testing	\$183,466
	Monitoring Well Installation - assumes 4 monitoring wells to 45' bgs (includes sampling/analysis)	\$42,587
	Groundwater Treatment - assumes 150' x 350' contamination plume; pump and treat with filtration and 2 carbon vessels (in series) w/ treated water discharge to POTW	\$148,804
	Groundwater Treatment O&M and Monitoring- assumes 5 year operation and monitoring	\$446,477
	Subtotal	\$821,334
	Contingency ^a (+15%)	\$123,200
	2009 Inflation adjustment ^b	\$28,797
Total	\$973,331	
Option 3	Dredging of shoreline sediments, installation of an upland barrier wall, and installation of an upland asphalt cap.	
	Soil Excavation and Off-Site Disposal (Haz) - assumes excavation of 2 upland hot spots (600 cy total); offsite disposal at haz facility; backfilling; decontamination facilities; analytical testing	\$183,466
	Monitoring Well Installation - assumes 4 monitoring wells to 45' bgs (includes sampling/analysis)	\$42,587
	Groundwater Treatment - assumes 150' x 350' contamination plume; pump and treat with filtration and 2 carbon vessels (in series) with treated water discharge to POTW	\$148,804
	Groundwater Treatment O&M and Monitoring - assumes 5 year operation and monitoring	\$446,477
	Barrier Wall - assumes soil bentonite barrier wall (i.e., slurry wall) around GW plume; dimensions: 1000' long x 60' deep with 12" protective gravel cover	\$539,517
	Upland Cap - assumes cap dimensions 150' x 350'; HDPE geomembrane with drainage/protection layer overlain with 3" thick asphalt surface layer (includes gas vents and perimeter security fence)	\$411,935
	Sediment Dredging - assumes nearshore sediment dredging using water-based equipment; includes bathymetric surveying (pre and post construction), sediment BMPs (e.g., booms, silt curtains, etc.), and sediment dewatering; dredge area 50' x 350' x 4' deep or approx. 2600 cubic yards	\$453,126
	Sediment Disposal - assumes offsite transportation and disposal of dredged sediment (following dewatering/solidification) at non-haz facility; 2600 cubic yards	\$193,737
	Subtotal	\$2,419,649
	Contingency ^a (+15%)	\$362,947
2009 Inflation adjustment ^b	\$84,836	
Total	\$2,867,432	

Notes:

1. Costs estimates developed using Remedial Action Cost Engineering and Requirements (RACER®), 2008, Software System for Windows
2. Estimates do not include additional study/investigation (e.g., RI/FS), design, long term monitoring, 5 year reviews, site closeout, etc.
3. Costs includes direct costs plus a location modifier of 1.021 (Washington State Average) and overhead and profit (25% field office overhead, 10% subcontractor profit, and 15% prime profit).

^a The 15% contingency allows for unforeseen costs.

^b Inflation mark up estimated using the RSMeans Historical Cost Index inflation mark up from 2008 to the first quarter of 2009



Parametrix DATE: Nov 24, 2009 FILE: BR1806059P01T01-F01



LEGEND:

- ⊙ Sediment Sample Location (E&E 2008)
- Monitoring Well Location (Geoengineers 2007)
- ▲ Soil Boring Location (E&E 2008)
- Monitoring Well Location (E&E 2008)

- , △, □ MTCA A Cleanup Levels Exceeded in Soils
- , △, □ MTCA A Cleanup Levels Exceeded in Groundwater
- Approximate Property Lines
- 15' Approximate Depth of Contaminated Soil
- ⊙ Sediment Management Standards Cleanup Levels Potentially Exceed in Sediment

NOTE:

Contour Datum NAVD 88

Figure 1
Old Bremerton Gas Works Site
Site Plan